

**Panasonic**  
ideas for life

**Super Dynamic III**  
**Color Surveillance Cameras**  
**Product Line-Up**



# Super Dynamic III — Exceeding the human eye.

Panasonic introduces the *Super Dynamic III* Series, the first surveillance cameras able to think and act on their own. They detect both external changes and attempts at interference and take the precise action required to prevent loss of vital scenes. Superb image quality, the result of unprecedented image-processing performance, delivers a true picture needed for rock-solid identification. With their extraordinary intelligence and active foresight, *Super Dynamic III* Series cameras bring amazing reality to 24-hour surveillance.



**SDIII**  
Super Dynamic

## The Leading Original Technologies Behind *Super Dynamic III*

### Pixel Based 128x Dynamic Range

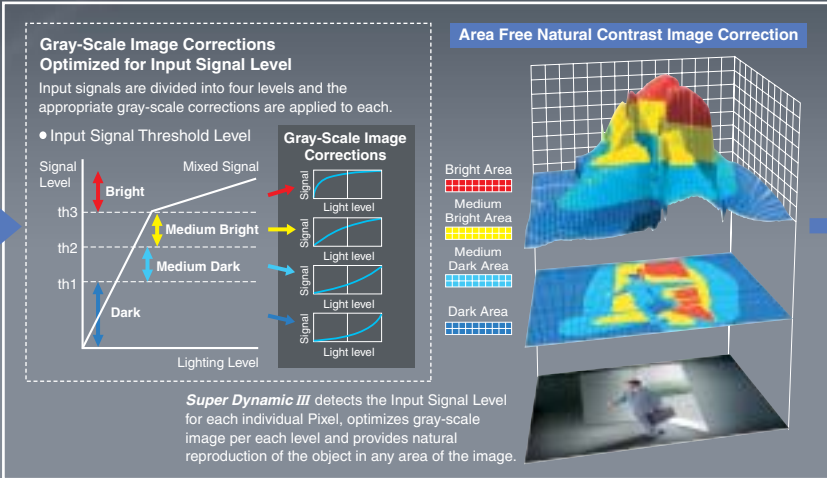
The double speed CCD outputs a 1/8,000 second short signal to capture the bright area of the image and a 1/60 second long signal to capture the shaded area. The enhanced DSP combines these signals to provide a dynamic range 128 times greater than a standard video camera. Also newly developed in the DSP is "Area Free (Pixel Based) Natural Contrast Image Correction", which optimizes the gray-scale image in response to the Input Signal Level of each individual Pixel. The Pixel Based 128x Dynamic Range delivers a smoother natural reproduction of high contrast images, e.g. heavy backlight conditions, regardless of object position, size, shape, or number.



1/8,000 sec. short signal for the bright parts

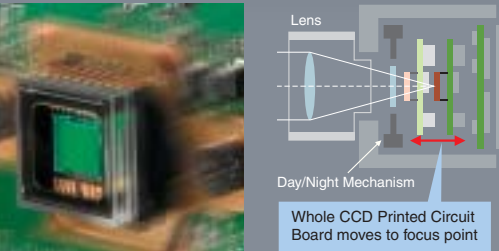


1/60 sec. long signal for the dark parts



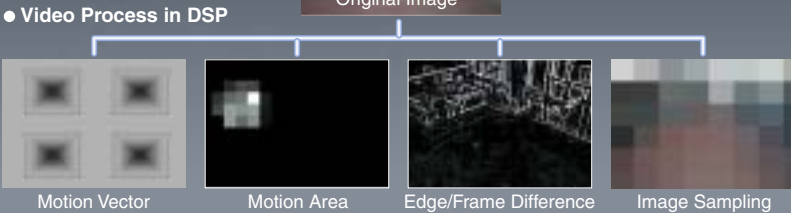
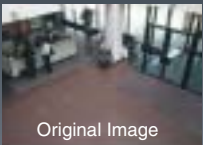
### Auto Back Focus (ABF) (WV-CP480 Series only)

When switching from color to B/W mode, the WV-CP480 Series automatically adjusts the CCD position to achieve the return to perfect focus. Blurring caused in previous cameras by removing the IR cut filter is eliminated. Then, when the camera switches back from B/W to color mode, the CCD automatically returns to the correct position for color imaging, ensuring perfect focus 24 hours, both night and day. Another important benefit of Auto Back Focus is eliminating the time and labor required to adjust focus after cameras have been installed. Focus can be roughly set when a camera is installed, then adjusted using the optional system controller.



### Intelligent Processing

Our newly developed DSP extracts Motion Vector, Motion Area, Edge/Frame Difference and Image Sampling data from the image and sends that data to the new Image Analysis Algorithm. The Algorithm is embodied in the proprietary microprocessor that performs the complex processing required by *Super Dynamic III*'s amazing intelligent functions.



|                                 |                                  |                               |
|---------------------------------|----------------------------------|-------------------------------|
| ● Software Process              |                                  |                               |
| Motion Vector/Motion Area       | Mot. Area/Frame Diff./Img. Samp. | Motion Area/Optical Zoom      |
| Reliability/Dispersion Decision | Stable -> Unstable Detection     | Zoom Coefficient Calculation  |
| Integration/Centering of Motion | Unstable -> Stable Detection     | Pan/Tilt Movement Calculation |
| Electronic Zoom Compensation    | Compare between Stable Scenes    | Command to Pan/Tilt           |
| Auto Image Stabilizer           | Scene Change Detection           | Auto Tracking*                |

\*WV-CW964/WV-CS954 only









IP66  
standard

30x  
OPTICAL ZOOM

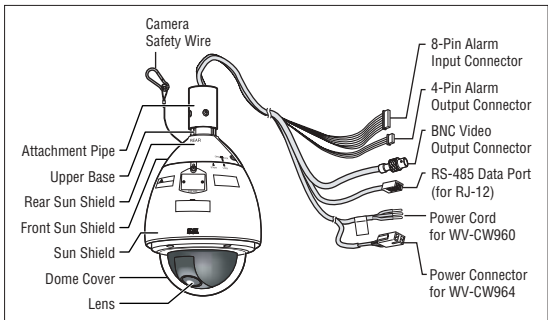


## Weather Proof Super Dynamic III Color Dome Camera WV-CS954 (AC 24V)

### For All-Weather Outdoor Use.

- IP66 of IEC 60529 standard for all weather proof environmental structure.
- Built-in fan/heater for temperature changes of -40°C ~ +50°C (-40°F ~ +122°F).
- Built-in sun shield permits camera locations in direct sunlight.
- All-in-one color dome camera unit.
- The new Pixel Based 128x Dynamic Range with area free natural contrast image correction adjusts moment-to-moment changes in contrast to view subjects accurately in all areas and positions.
- Higher horizontal resolution of 540-line (typical) at color mode, and 570-line at B/W mode.
- Minimum illumination of 0.5 lux (0.05 fc) at color mode, and 0.04 lux (0.004 fc) at B/W mode (Sens. up; off, AGC High).
- Innovative intelligent features:
  - \* Auto image stabilizer function for applications where vibration or wind is a concern, e.g. passing vehicles.
  - \* Scene change detection alarms when lens is covered, spray painted, removed, defocused or camera angle is changed.
  - \* Auto tracking function tracks moving objects and keeps them centered in the field of view for restricted areas and after hour applications.
- Day/Night operation can be selected to automatically or manually switch from color to B/W.
- Privacy zone masking function.
- Linear 32x electronic sensitivity enhancement function.
- Digital motion detector.
- 30x optical zoom lens (3.8 - 114 mm) plus 10x electronic digital zoom for total zoom capacity of 300x.
- Auto focus lens.
- Digital-FLIP by memory allows automatic 180° turn.
- Patrol Learn function (8 zone total).
- Auto panning function with 256 preset positions.
- 360° endless panning.
- Panning speed of max. 400°/s at preset mode and 0.065°/s super fine control at manual mode.
- Image Hold function during panning.
- Multiplex-coaxial or RS-485 data communication.
- Four (4) alarm inputs and two (2) outputs terminals.
- 16 alphanumeric character display.
- Internal/Line-lock/Multiplexed Vertical Drive (VD2) synchronization.
- 24V AC, 60Hz power source.

### MAJOR OPERATING CONTROLS & TERMINALS

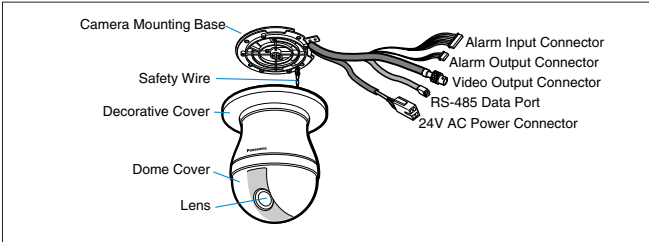


## Super Dynamic III Color Dome Camera WV-CS954 (AC 24V)

### 30x Optical Zoom. Auto Tracking. 256 Presets.

- All-in-one color surveillance dome camera unit.
- The new Pixel Based 128x Dynamic Range with area free natural contrast image correction adjusts moment-to-moment changes in contrast to view subjects accurately in all areas and positions.
- Higher horizontal resolution of 540-line (typical) at color mode, and 570-line at B/W mode.
- Minimum illumination of 0.5 lux (0.05 fc) at color mode, and 0.04 lux (0.004 fc) at B/W mode (Sens. up; off, AGC High).
- Innovative intelligent features:
  - \* Auto image stabilizer function for applications where vibration or wind is a concern, e.g. passing vehicles.
  - \* Scene change detection alarms when lens is covered, spray painted, removed, defocused or camera angle is changed.
  - \* Auto tracking function tracks moving objects and keeps them centered in the field of view for restricted areas and after hour applications.
- Day/Night operation can be selected to automatically or manually switch from color to B/W.
- Privacy zone masking function.
- Linear 32x electronic sensitivity enhancement function.
- Digital motion detector.
- 30x optical zoom lens (3.8 - 114 mm) plus 10x electronic digital zoom for total zoom capacity of 300x.
- Auto focus lens.
- Digital-FLIP by memory allows automatic 180° turn.
- Patrol Learn function (8 zone total).
- Auto panning function with 256 preset positions.
- 360° endless panning.
- Panning speed of max. 400°/s at preset mode and 0.065°/s super fine control at manual mode.
- Image Hold function during panning.
- Multiplex-coaxial or RS-485 data communication.
- Four (4) alarm inputs and two (2) outputs terminals.
- 16 alphanumeric character display.
- Internal/Line-lock/Multiplexed Vertical Drive (VD2) synchronization.
- 24V AC, 60Hz power source.
- Optional smoked dome cover, ceiling and wall mounts brackets are available for various applications.

### MAJOR OPERATING CONTROLS & TERMINALS



### OPTIONAL ACCESSORIES

WV-CS3S  
Smoke Cover



WV-Q105  
Direct Ceiling Installation



WV-Q116  
Embedded Ceiling Installation



WV-Q117  
Suspended Ceiling Installation



WV-Q118  
Wall Installation



### SPECIFICATIONS

| Model No.   | WV-CS954  |
|---|---|
| <b>General</b>  |   |
| Pick-up Device  | 1/4-type interline transfer CCD   |
| Effective Pixels  | 768 (H) x 494 (V)   |
| Scanning Area   | 3.65 mm (H) x 2.74 mm (V)   |
| Signal  | NTSC/EIA  |
| Synchronization   | Internal / Line-Lock / Multiplexed Vertical Drive (VD2)   |
| Scanning  | 2:1 interlace   |
| Scanning Frequencies  | Horizontal: 15.734 kHz, Vertical: 59.94 Hz  |
| Video Output  | VBS: 1.0 V [p-p] / 75 Ω (BNC connector)   |
| Horizontal Resolution (Center)                                    | 540 lines (in color, typical)<br>520 lines minimum (in color, HIGH mode)<br>480 lines minimum (in color, NORMAL mode)<br>570 lines minimum (in B/W) |
| Minimum Illumination  | 0.5 lux (0.05 fc) (in color) 0.04 lux (0.004 fc) (in B/W) *SENSE UP: OFF, AGC: HIGH   |
| Dynamic Range   | 52 dB typical (Super Dynamic III: ON)   |
| Signal-to-Noise Ratio   | 50 dB minimum (AGC: OFF)  |
| Ambient Operating Temperature                                     | -10 °C - +50 °C (14 °F - 122 °F) Humidity: 90 % max. (non-condensation)   |
| Power Source and Consumption                                      | 24 V AC, 60 Hz; 13.0 W  |
| Dimensions  | 154.5 mm (D) x 233 mm (H) (6-1/16" (D) x 9-3/16" (H))   |
| Weight  | approx. 2.2 kg (4.84 lbs.)  |
| <b>Pan and Tilt</b>   |   |
| Panning Range   | 360° endless  |
| Panning Modes   | Manual, auto, manual position, sequential position  |
| Panning Speed*  | Manual: approx. 0.065°/s - 120°/s 8 steps, 16 steps, 64 steps Preset: approx. 400°/s  |
| Tilting Range   | -5° - 185° (horizontal - vertical - horizontal) (According to the TILT ANGLE)   |
| Tilting Modes   | Manual, manual position, sequential position  |
| Tilting Speed*  | Manual: approx. 0.065°/s - 120°/s 8 steps, 16 steps, 64 steps Preset: approx. 400°/s  |
| * Actual speed depends on type of optional controller being used. |   |

|                        |   |
|------------------------|---|
| <b>Lens</b>            |   |
| Zoom Ratio             | 300x (30x optical zoom plus 10x electronic digital zoom)                |
| Focal Length           | 3.8 mm - 114 mm   |
| Maximum Aperture Ratio | 1:1.4 (WIDE) - 3.7 (TELE)   |
| Object Distance        | 1.5 m   |
| Iris Range             | F1.4 - 22, Close  |
| Angular Field of View  | Horizontal: 1.9° (TELE) - 52° (WIDE) Vertical: 1.4° (TELE) - 40° (WIDE) |

|                                    |  |
|------------------------------------|--|
| <b>Main Functions</b>              |  |
| Controller Interface               | Coaxial Multiplex System, RS-485 Transmission                              |
| Control Functions                  | Pan and tilt, zoom and focus, 256 preset positions, home position, patrol  |
| AGC                                | ON (LOW/MID/HIGH), OFF   |
| Character Display                  | ON, OFF (Preset ID, camera ID, area title: 16 alphanumeric characters)     |
| Zoom Speed                         | approx. 6.0 seconds (TELE - WIDE) in manual mode                           |
| Zoom Ratio Control                 | 1x - 300x (Over 30x is electronic zoom)                                    |
| Password Lock                      | All menus  |
| Focus Speed                        | approx. 6.0 seconds (FAR - NEAR, full TELE zoom) in manual mode            |
| Auto Focus                         | MANUAL/AUTO (PAN, TILT, ZOOM linked)                                       |
| Iris                               | ALC (Adjustable OPEN/CLOSE output target level)/MANUAL                     |
| Shutter                            | OFF (1/60), AUTO, 1/100, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/10,000 |
| Electronic Sensitivity Enhancement | 32x max. (AUTO or FIX; Factory Default: AUTO (2))                          |
| Auto Mode                          | OFF, SEQ, SORT, AUTO PAN, PATROL, AUTO TRACK                               |
| Auto Pan Key                       | SEQ, SORT, AUTO PAN, PATROL, AUTO TRACK                                    |
| Digital Flip                       | ON/OFF   |
| Super Dynamic III                  | ON/OFF   |
| Motion Detector                    | OFF/MODE1/MODE2  |
| Alarm Input/Output                 | 4 inputs (ALARM IN 1 - ALARM IN 4) 2 outputs (ALARM/AUX1, BW/AUX2)         |
| Black and White Mode Switching     | AUTO/ON/OFF  |
| Privacy Zone                       | ON/OFF (8 zone settings)   |
| Patrol                             | STOP/PLAY/LEARN  |
| Cleaning                           | ON/OFF   |
| Image Hold                         | ON/OFF   |
| Auto Image Stabilizer              | ON/OFF   |
| Scene Select Setting               | INDOOR (L) / INDOOR (H) / OUTDOOR (L) / OUTDOOR (H)                        |
| Language Setting                   | English, German, French, Italian, Spanish, Russian, Chinese, or Japanese   |

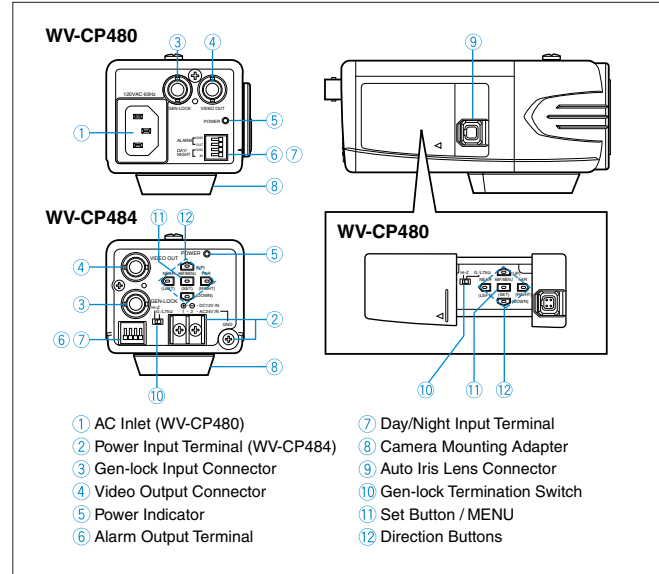


## Super Dynamic III Color Surveillance Cameras WV-CP480 SERIES WV-CP480 (AC 120V) WV-CP484 (AC 24V or DC 12V)

### Auto Back Focus, Sharper Images 24-hours a Day.

- 1/3-type double speed CCD color image sensor.
- The new Pixel Based 128x Dynamic Range with area free natural contrast image correction adjusts moment-to-moment changes in contrast to view subjects accurately in all areas and positions.
- Switches from selected color mode to B/W mode, automatically or manually.
- Higher horizontal resolution of 540-line (typical) at color mode, and 570-line at B/W mode.
- Minimum illumination:
  - 0.5 lux (0.05 fc) at color mode, 0.06 lux (0.006 fc) at B/W mode, at F1.2 optional lens
  - 0.6 lux (0.06 fc) at color mode, 0.08 lux (0.008 fc) at B/W mode, at F1.4 optional lens
- Innovative intelligent features:
  - \* Auto Back Focus (ABF) adjustment function, for easy focus at installation and remote focus fine tuning (up-the-coax or via network by WJ-HD300 Series) after installation.
  - \* Auto image stabilizer function for applications where vibration or wind is a concern, e.g. passing vehicles.
  - \* Scene change detection alarms when lens is covered, spray painted, removed, defocused or camera angle is changed.
- Signal to noise ratio of 50dB.
- Digital motion detector.
- Menu setup can be displayed in 8 (eight) languages: English, German, French, Spanish, Italian, Russian, Chinese and Japanese.
- 16-alphanumeric character display.
- Electronic shutter from 1/60 (off) to 1/10,000 sec.
- Electronic sensitivity enhancement (auto/manual/off).
- Digital signal processing LSI's for high quality picture:
  - 2H vertical enhancement, chroma averaging circuit, minimum of aliasing, knee circuit, and highlight aperture correction.
- Gen-lock capability for the large system application.
- VD2 sync capability with Panasonic system products.
- Accepts both 24V AC or 12V DC power source (WV-CP484 model only).

### MAJOR OPERATING CONTROLS & TERMINALS



### SPECIFICATIONS

| Model No.                             | WV-CP480   | WV-CP484  |
|---------------------------------------|--|---|
| Pick-up Device                        | 768 (H) x 494 (V) pixels, interline transfer CCD   |   |
| Scanning Area                         | 4.8 (H) x 3.6 (V) mm (Equivalent to scanning area of 1/3" pick-up tube)  |   |
| Scanning                              | 525 lines/60 fields/30 frames  |   |
| Horizontal                            | 15.734 kHz   |   |
| Vertical                              | 59.94 Hz   |   |
| Synchronization                       | Multiplexed vertical drive (VD2), Line-locked, VBS/VS, or Internal   |   |
| GEN LOCK Input                        | VBS / VS 1.0 V [p-p] composite 75 Ω / BNC connector  |   |
| Video Output                          | 1.0 V [p-p] NTSC/EIA composite 75 Ω / BNC connector  |   |
| Resolution                            | Horizontal   | 540 lines (in Color, Typical)<br>520 lines min. (in Color, at High)<br>480 lines (in Color, Normal)<br>570 lines (in B/W) |
| Vertical                              | 350 lines (at center)  |   |
| Dynamic Range                         | 52 dB typical (Super Dynamic III: ON)  |   |
| Signal-to-Noise Ratio                 | 50 dB (Equivalent to AGC Off, weight ON)   |   |
| Minimum Illumination                  | 0.5 lux (0.05 fc) at F1.2 (in Color)<br>0.6 lux (0.06 fc) at F1.4 (in Color)<br>0.06 lux (0.006 fc) at F1.2 (in B/W)<br>0.08 lux (0.008 fc) at F1.4 (in B/W) |   |
| Lens Mount                            | CS-mount (supplied with C-mount adapter)   |   |
| <b>Major Items on Menu Setup</b>      |  |   |
| Language                              | English, French, German, Spanish, Italian, Russian, Chinese, or Japanese   |   |
| Camera ID                             | Up to 16 characters  |   |
| Light Control                         | ALC/ELC  |   |
| Super Dynamic III                     | ON or OFF  |   |
| Electronic Shutter Speed              | 1/60(OFF), 1/100, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/10,000 s  |   |
| Gain Control                          | ON (HIGH), ON (MID), ON (LOW), or OFF  |   |
| Sensitivity Enhancement               | OFF, x2AUTO, x4AUTO, x6AUTO, x10AUTO, x2FIX, x4FIX, x6FIX, x10FIX, x16FIX, x32FIX  |   |
| White Balance                         | ATW1, ATW2 or AWC  |   |
| Motion Detection                      | ON (Model1/Mode2) / OFF  |   |
| Digital Noise Reduction               | High or Low  |   |
| Resolution                            | Normal or High   |   |
| Black-and-White Mode                  | AUTO1, AUTO2, EXT, ON, or OFF  |   |
| Privacy Zone                          | ON (On1/On2) / OFF   |   |
| Mirror                                | ON or OFF  |   |
| ALC Lens Drive                        | DC or Video  |   |
| Camera-Shake Compensation             | ON or OFF  |   |
| Back Focus Adjustment                 | Auto Back Focus, MANUAL, AUTO/PRESET/FIX   |   |
| Special                               | Chroma, Aperture, Pedestal, HUE adjustable   |   |
| Ambient Operating Temperature         | -10 °C - +50 °C (14 °F - 122 °F)   |   |
| Ambient Operating Humidity            | Less than 90 %   |   |
| Power Source and Power Consumption    | 120 V AC 60 Hz, 4.8 W  | 24 V AC 60 Hz, 4.7 W<br>12 V DC, 410 mA   |
| Dimensions (without lens) (W x H x D) | 70 x 65 x 129 mm<br>(2-3/4" x 2-9/16" x 5-1/16")   | 67 x 65 x 100 mm<br>(2-5/8" x 2-9/16" x 3-15/16")   |
| Weights (without lens)                | 520 g (1.1 lbs.) (without power cord)  | 400 g (0.9 lbs.)  |

### OPTIONAL ACCESSORIES

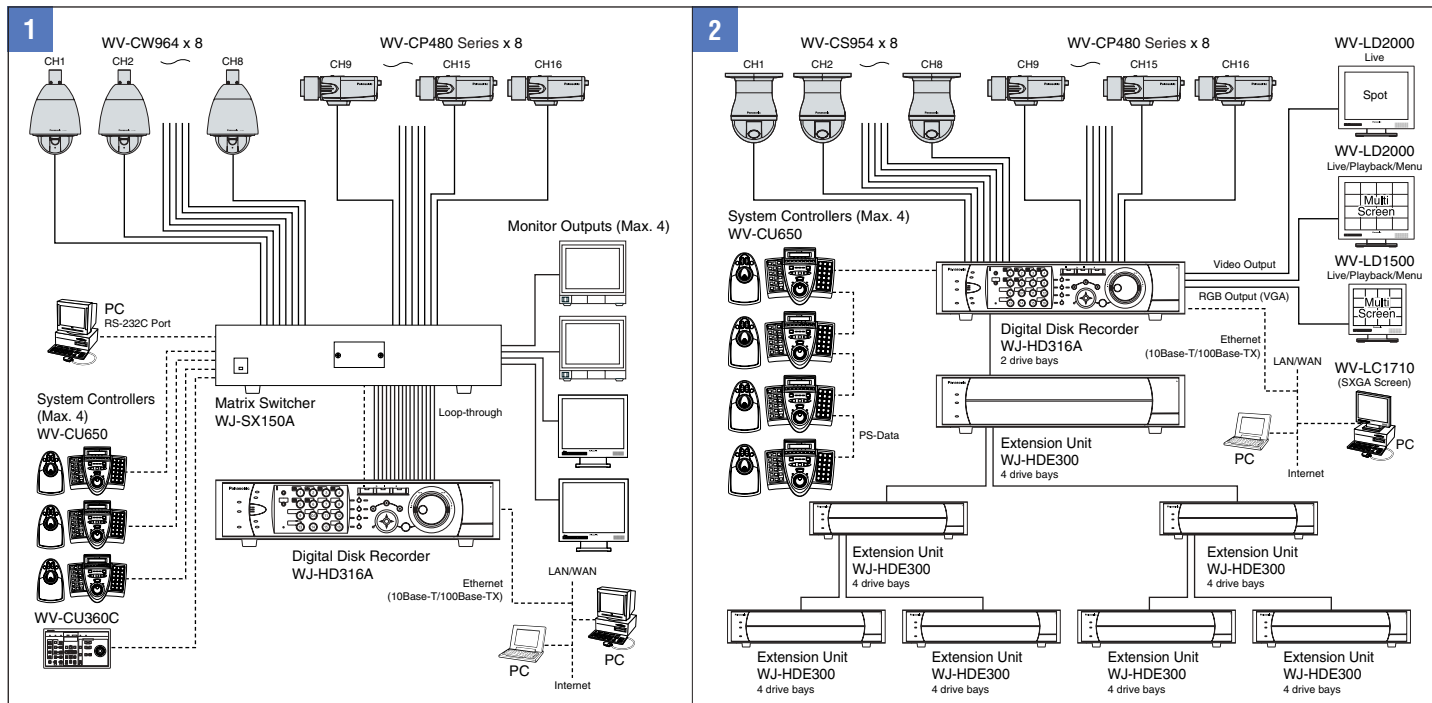
1/3-type Variable Focal Lens  
WV-LZA61/2S  
(3.8 - 8 mm)



1/3-type Variable Focal Lens  
WV-LZ62/8S  
(5 - 40 mm)



## SYSTEM EXAMPLES



## OPTIONAL COMPONENTS & ACCESSORIES

### DIGITAL DISK RECORDERS

**WJ-HD316A** (16ch)  
**WJ-HD309A** (9ch)  
**WJ-HD220** (8ch)



### MATRIX SYSTEMS

**SYSTEM 650**  
**SYSTEM 150**



### COLOR MONITORS

**WV-LC1710** 43.2cm (17")  
**WV-LD1500** 38.1cm (15")  
**WV-LD2000** 50.8cm (20")  
**WV-CM1420** 34cm (13")  
**WV-CM1020** 22cm (9")



### PS-Data



## Panasonic Preserving the Environment

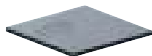
### Energy Saving

Panasonic has used proprietary technology to develop the low-energy DSP's that have, for example, reduced energy consumption in our cameras by 9.4% since 1997, from 5.3 watts (WV-CP650) to 4.8 watts (WV-CP480).

Color Surveillance Camera  
WV-CP480



Image processing DSP



### Energy-saving Trend

WV-CP650

WV-CP480



### Package Recycling

To reduce waste and pollution, we have eliminated Styrofoam and minimized use of polyurethane film in our packaging.



Carton box for WV-CP480 Series

### Lead-free Solder

The hazardous effects of lead solder have been recognized since the 1980s. Panasonic has been a leader in addressing this issue and in 1998 introduced the world's first portable MD player with lead-free solder in its circuit board. The Security Systems Division is now phasing out use of lead solder in all of its products.

### ISO14001 Certification

Besides our R&D Division, Panasonic has achieved the environmental ISO14001 certification for plants in Yokohama, Japan, and in Suzhou, China.



## iF Design Award

The superior exterior shell design of Panasonic surveillance equipment has won recognition around the world. Our WV-CS950 Series indoor cameras won a 2006 iF design award.



**Important** – Safety Precaution: carefully read the operating instructions and installation manual before using this product.

• All TV pictures are simulated. • Weights and dimensions are approximate. • Specifications are subject to change without notice. • These products may be subject to export control regulations.

# Panasonic

**Panasonic System Solutions Company**

Unit Company of Panasonic Corporation of North America

**Security Systems**

Website : [www.panasonic.com/security](http://www.panasonic.com/security)

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